



Flat Roofing **Product Guide**





[Traditional Felt](#)

[Pour & Roll Membranes](#)

[Torch Applied Membranes](#)

[Self-adhesive Membranes](#)

[Ancillary Products & Accessories](#)

Icopal Range

The Icopal range of waterproofing membranes has been developed to provide a comprehensive range of products to suit all applications; from traditional Shed Felt for basic DIY application through to Self Adhesive systems for the more experienced DIY applicator and professional roofer.

Also within the range are membranes for application by experienced roofing contractors including fully guaranteed membranes manufactured on high tensile polyester reinforcements and high performance polymer modified bitumen for pour and roll, torch-on and self-adhesive applications.

To compliment these waterproofing membranes is a range of primers for the preparation of the roofing substrate.

Roof detailing is also made easier with a comprehensive range of roofing accessories for drainage, pedestrian walkways, service entry for pipes and cables as well as a range of versatile plant support equipment. Finishes for roof edges are catered for with a range of GRP roof edge trims providing a neat and pleasing finish.

Product Index

Material Code	Description	Roll Size	Surface Finish	See Page
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Anderson Traditional Bitumen Range

Capsheet

2002650	Anderson Green Traditional Mineral Capsheet	1m x 10m	Green Mineral	17
2004171	Xtra-Gard Shed Felt Mineral Capsheet	1m x 10m	Green Mineral	16
2004172	Xtra-Gard Premium Shed Felt Mineral Capsheet	1m x 8m	Green Mineral	16

Underlays

2002599	Anderson 1m x 10m Traditional Underlay	1m x 10m	Sand	16
2002651	Anderson 1m x 20m Traditional Underlay	1m x 20m	Sand	16

High Tensile Pour & Roll Bitumen Range

Capsheets

2002601	Anderson HT 180 Polyester Capsheet	1m x 10m	Green Mineral	19
2002604	Anderson HT 250 Polyester Capsheet	1m x 10m	Green Mineral	19

Underlays

2000234	Anderson HT 125 Polyester Underlay	1m x 16m	Sand	19
2002600	Anderson HT 180 Polyester Underlay	1m x 20m	Sand	19
2002602	Anderson HT 250 Polyester Underlay	1m x 20m	Sand	19

Material Code	Description	Roll Size	Surface Finish	See Page
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Preparation Layers

2002652	Anderson 3B Glass Base Layer	1m x 20m	Sand	17
2002700	Anderson 3G Perforated Glass Base Layer	1m x 10m	Mineral Underside	17
2002701	Anderson 3H Perforated Glass Base Layer	1m x 20m	Sand	17

SBS Modified Bitumen Pour & Roll Range

Capsheets

2000165	Anderson Glastex SBS Glass Capsheet	1m x 10m	Green Mineral	21
2003154	Anderson Polyflex SBS Polyester Capsheet	1m x 10m	Green Mineral	21
2000201	Anderson Polyflex SBS Polyester Capsheet	1m x 10m	Blue/Grey Mineral	21
2000367	Power Elastomeric 250 Capsheet	1m x 8m	Green Mineral	22
2000365	Power Elastomeric 250 Capsheet	1m x 8m	Blue/Grey Mineral	22
2000366	Power Elastomeric 250 Capsheet	1m x 8m	Brown Mineral	22

SBS Modified Bitumen Pour & Roll Range

Underlays

2003151	Anderson Polyflex SBS Polyester Underlay	1m x 20m	Sand	21
2000360	Power Elastomeric 180 Sanded Underlay	1m x 16m	Sand	22
2000364	Power Elastomeric 250 Sanded Underlay	1m x 16m	Sand	22

Vapour Control Layers

2000141	Anderson Vapourbar VCL Metal Lined Vapour Control Layer	1m x 20m	Sand	23
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Material Code	Description	Roll Size	Surface Finish	See Page
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APP Modified Bitumen Torch Applied Range

Capsheets

3101102	TopTorch APP Torch-on Capsheet	1m x 8m	Green Mineral	25
3101104	TopTorch APP Torch-on Capsheet	1m x 8m	Brown Mineral	25
3101103	TopTorch APP Torch-on Capsheet	1m x 8m	Charcoal Mineral	25
3101105	TopTorch APP Torch-on Capsheet	1m x 8m	Plain	25
3005495	Anderson APP Torch-on Capsheet	1m x 8m	Plain	25
3005490	Anderson APP Torch-on Capsheet	1m x 8m	Green Mineral	25
3004977	Performa APP Torch-on Capsheet	1m x 8m	Plain	25
3004920	Performa APP Torch-on Capsheet	1m x 8m	Green Mineral	25

Underlays

3101106	TopTorch AP2 APP Torch-on Underlay	1m x 16m	Film	25
3101109	TopTorch AP3 APP Torch-on Capsheet	1m x 10m	Film	25
3004913	Anderson APP Torch-on Underlay	1m x 16m	Film	25

Material Code	Description	Roll Size	Surface Finish	See Page
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SBS Modified Bitumen Torch Applied Range

Capsheets

2000312	Anderson SBS Torch-on Capsheet Sanded	1m x 8m	Sand	27
2000225	Anderson SBS Torch-on Mineral Capsheet	1m x 8m	Green Mineral	27
2003688	Anderson SBS Torch-on Mineral Capsheet	1m x 8m	Blue/Grey Mineral	27
2003689	Anderson SBS Torch-on Mineral Capsheet	1m x 8m	Brown Mineral	27
2003690	Anderson SBS Torch-on Mineral Capsheet	1m x 8m	Charcoal Mineral	27
2004180	TopTorch SBS Torch-on Mineral Capsheet	1m x 8m	Green Mineral	27
2004181	TopTorch SBS Torch-on Mineral Capsheet	1m x 8m	Charcoal Mineral	27
2004182	TopTorch SBS Torch-on Mineral Capsheet	1m x 8m	Brown Mineral	27

Underlays

2004294	Anderson SBS Sand Torch-on Underlay	1m x 10m	Film Underside Sand Upperside	27
2002718	Anderson SBS Film Torch-on Underlay	1m x 16m	Film Top and Bottom	27
2004336	TopTorch SB2 SBS Torch-on Underlay	1m x 16m	Film Underside and Sand Upperside	27
2004337	TopTorch SB3 SBS Torch-on Underlay	1m x 10m	Film Underside and Sand Upperside	27

Material Code	Description	Roll Size	Surface Finish	See Page
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SBS Advanced Bitumen Torch Applied Range Capsheets

2002703	Tecnatorch Torch-on Sanded Capsheet	1m x 7.5m	Sand	29
2002705	Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Green Mineral	29
2002704	Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Blue/Grey Mineral	29
2002707	Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Brown Mineral	29
2003538	Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Charcoal Mineral	29
2002706	Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	White Mineral*	29
2000347	Thermaweld* Torch-on Mineral Capsheet	1m x 8m	Green Mineral	29
2000344	Thermaweld* Torch-on Mineral Capsheet	1m x 8m	Blue/Grey Mineral	29
2000354	Thermaweld* Torch-on Mineral Capsheet	1m x 8m	Brown Mineral	29
2003988	Thermaweld Torch-on Mineral Capsheet	1m x 8m	Charcoal Mineral	29

* Also available with Copper or Aluminium foil upper surface made to order - minimum quantity applies.

Underlays

2002780	Total Torch Vapour Dispersion Layer	1m x 8m	Film Top, Mini-Stripes Underside	32
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Vapour Control Layers

2002781	Total Torch Vapour Control Layer	1m x 8m	Mini Stripes Top, Film Underside	32
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Noxite® Torch-on

3007126	Noxite® Classic Torch-on Mineral Capsheet	1m x 7.5m	Noxite Light Grey Mineral	31
2004291	Thermaweld Noxite® Torch-on Mineral Capsheet	1m x 8m	Noxite Dark Grey	31

Material Code	Description	Roll Size	Surface Finish	See Page
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FireSmart® Thermaweld

2004331	FireSmart® Thermaweld Torch-on Mineral Capsheet*	1m x 8m	Green Mineral	30
2004332	FireSmart® Thermaweld Torch-on Mineral Capsheet*	1m x 8m	Blue/Grey Mineral	30
2004333	FireSmart® Thermaweld Torch-on Mineral Capsheet*	1m x 8m	Brown Mineral	30
2004334	FireSmart® Thermaweld Torch-on Mineral Capsheet*	1m x 8m	Charcoal Mineral	30
2004335	FireSmart® Thermaweld Noxite Torch-on Mineral Capsheet	1m x 8m	Noxite Dark Grey Mineral	30

FireSmart® Tecnatorch

2003031	FireSmart® Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Green Mineral	30
2003030	FireSmart® Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Blue/Grey Mineral	30
2003035	FireSmart® Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Brown Mineral	30
2004344	FireSmart® Tecnatorch Torch-on Mineral Capsheet	1m x 7.5m	Charcoal Mineral	30

FireSmart® Pour & Roll

2003025	FireSmart® Pour & Roll Mineral Capsheet	1m x 8m	Green Mineral	23
2003024	FireSmart® Pour & Roll Mineral Capsheet	1m x 8m	Blue/Grey Mineral	23
2003026	FireSmart® Pour & Roll Mineral Capsheet	1m x 8m	Brown Mineral	23

Material Code	Description	Content/Roll length	See Page
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Primers

3005737	Xtra-Seal SF Bitumen Primer	18Lt Tub	39
3007163	Icopal SA Bitumen Primer	4.5kg Tin	40
3000862	Xtra-Seal QD Bitumen Primer	25Lt Drum	39

Ancillary Products

2002605	HT Taping Strip	100mm x 16m	40
3005190	Icopal Bitumen Sealant	300ml Cartridge	40
3100699	Icopal Terokal 395 Insulation Adhesive	750ml Cartridge	41
3100700	Icopal Terokal Cleaner	750ml Cartridge	41

Heat Activated Self Adhesive

3006772	Micoral SK Heat Activated Self Adhesive Vapour Control Layer	1m x 15m	Blue Syntan®	38
3005218	Pyrobar Heat Activated Self Adhesive Underlay	1m x 10m	Red Syntan®	38
3005219	Pyrobar Heat Activated Self Adhesive Detailing Underlay	1m x 10m	Red Syntan®	38

Design Considerations & Good Roofing Practice

This section is designed to provide general guidance on the design and installation of the Reinforced Bitumen Roofing Membranes contained within this brochure. For further information or specific advice contact Icopal Technical Services on 0161 865 4444.

Structural Decks – concrete, timber boarding, plywood, OSB 3 and profiled metal decking are the most common types of structural deck used for flat roofing. It is important to carefully select the type of structural deck material to suit the use of the roof and its capability to withstand imposed loads and any possible snow loading etc.

Roof Types

There are generally three types of flat roof construction:

- 1. Warm Roof** – thermal insulation is positioned above the roof deck and vapour control layer and immediately below the waterproofing, resulting in the structural deck and ceiling being at a temperature close to that of the interior of the building. Ventilation of the roof void is not required. However due consideration must be given to providing a minimum upstand requirement of 150mm above the finished roof level for all details.
- 2. Cold Roof** – this type of roof must be carefully designed to avoid premature failure and should be avoided wherever possible. Thermal Insulation is positioned immediately above the ceiling, resulting in the roof covering and structural deck being substantially colder in winter than the interior of the building. It is important that a minimum 50mm void is allowed between the top of the insulation and the roof deck; this void must be ventilated and cross ventilation must be provided with a minimum 25mm continuous opening at eaves on opposing sides of the roof and the provision for venting between

joists. If eaves cross ventilation is not possible proprietary roof vent systems must be installed.

3. Inverted roofs – thermal insulation is positioned above the roof covering, resulting in the roof covering, structural deck and ceiling being at a temperature close to that of the interior of the building. The insulation type for use on inverted roofs must be Extruded Polystyrene (XPS) and is secured by ballast loading. **Note:** the roof deck must be capable of withstanding the additional loading of a ballasted roof.

Thermal Insulation – new and refurbished roofs will need to be insulated to meet the requirements of the current Building Regulations. Specific guidance on the calculation of thermal transmittance (“U”) values and condensation risk within a structure can be found in the current issue of BS6229. Specific U-Value calculations can be provided by Icopal Technical Services.

Wind Action – the design of the roof structure and choice of waterproofing system must make allowance for wind forces which can have a significant effect on roof coverings, particularly during winter gales and in exposed locations. Attachment of roofing systems should comply with the current recommendations of EN1991-1-4. Specific wind uplift calculations can be provided by Icopal Technical Services.

Fire – the fire requirements of the current Building Regulations must be taken into consideration when designing the roof and waterproofing system. These requirements are based on the performance of the roof structure as submitted for assessment in accordance with the combined fire testing and certification to BS 476-3:2004 and CEN/TS 1187:2012 – Test 4 (including EN13505-5 Test 4 Classification). An EXT.F.AA, F.AB or F.AC (E_{ROOF}) result will normally allow unrestricted use and Icopal High Performance Waterproofing Systems will achieve one of these results.

In response to industry discussions with the National Federation of Roofing Contractors (NFRC) regarding specifications that call for torch-on application to combustible substrates such as plywood and OSB 3, and other areas of roofs that carry potential fire risks, for example junctions to existing pitched roofs or cladding, etc. it has become necessary to review the type of products used in relation to the application of waterproofing systems to flammable substrates and details.

The use of torch-on membranes directly to flammable substrates such as plywood or OSB 3 will no longer be allowed, as this is against the Code of Practice and adds significant risk to the roofing operation for which the roofing contractor may not be insured.

For applications that include plywood or OSB 3, heat activated/self adhesive membranes such as Micoral SK Vapour Control Layer should be used.

Installation

Cover Flashing – prior to the application of the waterproofing membranes suitable chases should be cut to receive FormFlash flashing installed in accordance with current Icopal instructions. All chases must be positioned a minimum of 150mm above the proposed finished level of the roof surface.

Substrates – all substrates to receive the waterproofing membranes must be clean, free from oil, grease and sharp projections, all mechanical fixings used to secure the roof deck must be well driven to prevent fixings puncturing the membranes.

Surface Preparation – metal, concrete, and screeded surfaces, plywood, OSB 3 and masonry should be primed with either; Xtra-Seal SF Bitumen Primer (Solvent Free) or Xtra-Seal QD Bitumen Primer or for Heat Activated Self Adhesive Membranes Icopal SA Bitumen Primer in accordance with the coverage rates and instructions on the containers.

Membrane Attachment – on plywood, OSB 3, or other flammable substrates the first layer must be a heat activated self adhesive membrane. Where membrane application is to detail areas such as upstands, or details to cladding etc. careful consideration must be given to the chosen method of membrane application using heat activated self adhesive membranes such as Pyrobar Detailing Underlay. Alternatively consideration may be given to completing vulnerable details with a cold applied system such as Icopal Elastoflex Liquid Waterproofing system

On concrete, and screeded surfaces the first layer of waterproofing must be partially bonded using the appropriate preparation layer. When using the pour and roll method of application the preparation layer should be Anderson 3G Perforated Glass Base Layer; for Torch-on application Anderson VBL – Torch-on Venting Base Layer or Total Torch Vapour Dispersion Layer can be used. If using specific Torch-on systems the corresponding preparation layer is required. When applying the waterproofing system over Polyurethane (PUR) or Polyisocyanurate (PIR) the waterproofing must be partially bonded as described above. Timber boarded decks require the first layer of waterproofing to be nailed at 150mm staggered centres over the field area and at 50mm

centres along side and end laps. Pour and roll systems require a layer of Anderson HT 125 Polyester Underlay to be nailed whereas a Torch-on system will require the use of Anderson HT 180 Polyester Underlay nailed.

On metal decks the waterproofing system is laid over the chosen insulation, which is laid onto a vapour control layer bonded to the primed metal deck.

Waterproofing layers are laid with minimum 75mm side laps and minimum 100mm end laps (or as otherwise specified) and fully sealed. Successive layers of waterproofing are applied with side lap joints offset by 300mm and end laps must also be offset from the previous layers to avoid a build up of joints in successive layers. When applying waterproofing membranes using the pour and roll method of application 95/25 grade bitumen should be used on roofs up to and including 5° pitch and 115/15 grade bitumen over 5° pitch or as otherwise specified. End/head laps on membranes applied on roofs over 5° pitch must be mechanically fixed. When applying waterproofing membranes by torching it is essential that the thermofusible film is completely dispersed and a continuous 5mm bead of bitumen extrudes from all laps as work proceeds.

Technical Support

For detailed application and specification details refer to specific product literature and/or product data sheets. Icopal Area Technical Managers are available to offer full technical guidance, roof surveys and condition reports supported by written reports for both existing roofs for refurbishment or new build roof construction and waterproofing specifications. In addition Icopal Technical Services can provide detailed thermal insulation calculations and condensation risk analysis. Individual CAD detail drawings can also be provided for all roofing details.

Useful References

- BS 8747:2007. Reinforced bitumen membranes (RBM's) for roofing – Guide to selection and specification.
- BS 8217:2005. Reinforced bitumen membrane for roofing – Code of practice.
- BS 6229:2003. Flat roofs with continuously supported coverings – Code of practice.
- BS 8000: Part 4: 1989. Workmanship on building sites - Part 4 Code of practice for waterproofing.
- BS 476-3:2004. Fire tests on building materials and structures – Part 3 Classification and method of test for external fire exposure to roofs.

Traditional Range

Economical glass fibre based membranes coated with oxidised bitumen

Application

- Nailed with galvanised clout nails
- Bonded with Icopal Hot Bitumen Compound

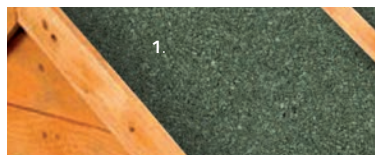
Typical Uses

- Sheds
- Garden buildings
- Non habitable building

Typical Applications

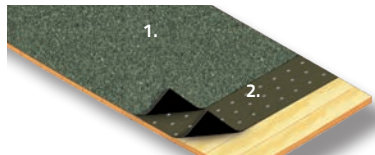
Single Layer Waterproofing for Sheds, Kennels & Hutches etc. with roof pitches over 20°

1. Xtra-Gard Shed Felt or Xtra-Gard Premium Shed Felt



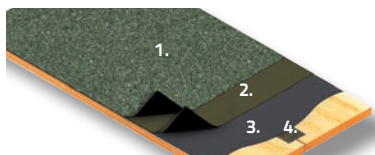
Two Layer Waterproofing on Timber Boards

1. Anderson Green Traditional Mineral Capsheet
2. Anderson Traditional Underlay, nailed



Three Layer Waterproofing on Plywood/OSB 3

1. Anderson Green Traditional Mineral Capsheet
2. Anderson Traditional Underlay
3. Anderson Traditional Underlay, nailed
4. HT 125 Taping Strip to board joints



Traditional Products range

Xtra-Gard Shed Felt

- Light yet durable
- Glass fibre reinforced
- Fine green mineral finish

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Xtra-Gard Shed Felt Mineral Capsheet	1m x 10m / 23kg	2004171

Xtra-Gard Premium Shed Felt

Manufactured on a strong polyester reinforcement and coated with bitumen. The upper surface is finished with decorative green mineral granules and the underside is finished with fine silica sand to prevent sticking in the roll. Designed to provide a more durable, longer lasting solution to the waterproofing of temporary portable buildings with pitched roofs, such as garden sheds, stables, kennels and non-inhabited buildings. It is not recommend for use on domestic flat roof applications.

- Durable and longer lasting
- Green mineral surface
- Easily applied
- Nailed/Cold application

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Xtra-Gard Premium Shed Felt Mineral Capsheet	1m x 8m / 22kg	2004172

Traditional Underlays

- Glass Fibre reinforced
- Sanded finish

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Anderson 1m x 10m Traditional Underlay	1m x 10m / 18kg	2002599
Anderson 1m x 20m Traditional Underlay	1m x 20m / 36kg	2002651

Traditional Products range

Traditional Capsheets

- Heavy weight
- Glass fibre reinforced
- Green mineral finish

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Anderson Green Traditional Mineral Capsheet	1m x 10m / 38kg	2002650

Preparation Layers

- Available in standard or perforated
- Glass fibre reinforced

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Anderson 3B Glass Base Layer	1m x 20m / 38kg	2002652
Anderson 3G Perforated Glass Base Layer	1m x 10m / 26kg	2002700
Anderson 3H Perforated Glass Base Layer	1m x 20m / 37kg	2002701

High Tensile Range

Polyester reinforced membranes coated with oxidised bitumen

Application

- Pour and roll in Icopal Hot Bitumen Compound

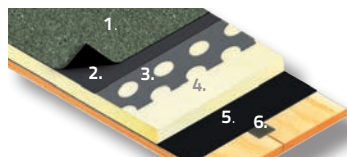
Typical Uses

- Garages
- Extensions/workshops
- Garden buildings

Typical Build-ups

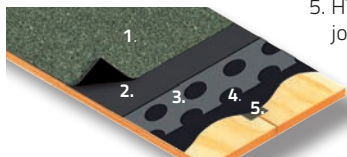
Warm Roof, Plywood / OSB 3 Deck, Bitumen Bonded

1. Anderson HT 250 Polyester Capsheet
2. Anderson HT 180 Polyester Underlay
3. Anderson 3G Perforated Glass Base Layer
4. Thermazone Roofboard
5. Anderson Vapourbar VCL Metal Lined Vapour Control Layer
6. HT 125 Taping Strip to board joints



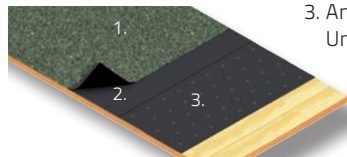
Cold Roof, Plywood / OSB 3 Deck, Bitumen Bonded

1. Anderson HT 250 Polyester Capsheet
2. Anderson HT 180 Polyester Underlay
3. Anderson 3G Perforated Glass Base Layer
4. Xtra-Seal QD Bitumen Primer
5. HT 125 Taping Strip to board joints



Cold Roof, Timber Board Deck, Nailed

1. Anderson HT 250 Polyester Capsheet
2. Anderson HT 180 Polyester Underlay
3. Anderson HT 125 Polyester Underlay - nailed



High Tensile Products range

Anderson HT Range

- Underlays and capsheets available
- Underlays sand finished
- Choice of weights
- BBA Approved
- Polyester reinforced



Product Availability		
Product	Roll Width/Length/Weight	Product Code
Anderson HT 125 Polyester Underlay	1m x 16m / 30kg	2000234
Anderson HT 180 Polyester Underlay	1m x 20m / 37kg	2002600
Anderson HT 250 Polyester Underlay	1m x 20m / 41kg	2002602
Anderson HT 180 Polyester Capsheet	1m x 10m / 36kg	2002601
Anderson HT 250 Polyester Capsheet	1m x 10m / 37kg	2002604

SBS Modified Bitumen Range

Polyester and glass fibre reinforced membranes coated with SBS modified bitumen

Application

- Pour and roll in Icopal Hot Bitumen Compound

Product Guarantee

- 10 years (life expectancy 20 years)

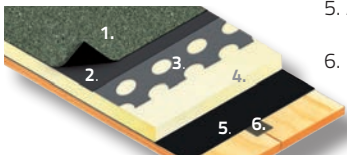
Typical Uses

- Garages
- Extensions/workshops
- General roofing

Typical Build-ups

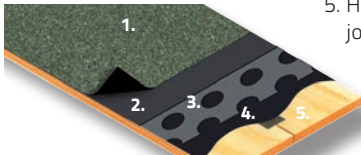
Warm Roof, Plywood / OSB 3 Deck, Bitumen Bonded

1. See capsheet range on page 21
2. Anderson Polyflex SBS Polyester Underlay
3. Anderson 3G Perforated Glass Base Layer
4. Thermazone Roofboard
5. Anderson Vapourbar VCL Metal Lined Vapour Control Layer
6. HT 125 Taping Strip to board joints



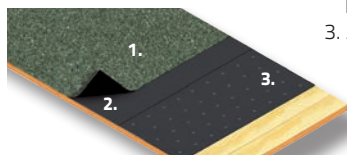
Cold Roof, Plywood / OSB 3 Deck, Bitumen Bonded

1. See capsheet range on page 21
2. Anderson Polyflex SBS Polyester Underlay
3. Anderson 3G Perforated Glass Base Layer
4. Xtra-Seal QD Bitumen Primer
5. HT 125 Taping Strip to board joints



Cold Roof, Timber Board Deck, Bitumen Bonded

1. See capsheet range on page 21
2. Anderson Polyflex SBS Polyester Underlay
3. Anderson HT 125 Polyester Underlay - nailed



Glastex Range

- Glass fibre reinforced
- SBS modified bitumen
- Green mineral finish capsheet

Product Availability

Product	Roll Width/Length/Weight	Product Code
Anderson Glastex SBS Glass Capsheet - Green Mineral	1m x 10m / 32kg	2000165

Polyflex SBS Range

- Underlay and capsheets available
- Polyester reinforced
- SBS modified bitumen
- Sand finish underlays
- Green or Blue/Grey capsheets available

Product Availability

Product	Roll Width/Length/Weight	Product Code
Anderson Polyflex SBS Polyester Underlay	1m x 20m / 39kg	2003151
Anderson Polyflex SBS Polyester Capsheet - Green Mineral	1m x 10m / 35kg	2003154
Anderson Polyflex SBS Polyester Capsheet - Blue/Grey Mineral	1m x 10m / 35kg	2000201

APP Modified Bitumen Range

APP bitumen is modified with Atactic Polypropylene, characterised by a high heat resistance and plastomeric feel

Application

- Torch-on

Typical Uses

- Commercial or domestic

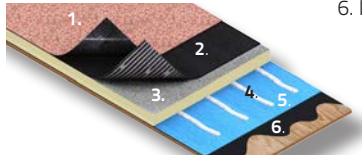
Product Guarantee

- 10 years (life expectancy 20 years).

Typical Build-ups

Warm Roof, Plywood / OSB 3 Deck

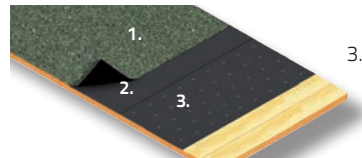
1. See capsheet choice on page 25
2. Total Torch Vapour Dispersion Layer
3. Thermazone Torch-on Insulation
4. Icopal Terokal TK 395 insulation adhesive*
5. Micoral SK Heat Activated Self Adhesive Vapour Control Layer
6. Icopal SA Primer



* Minimum 3 stripes, 30mm wide at 300mm centres. see page 40 for details.

Cold Roof, Timber Boarded Deck

1. See capsheet choice on page 25
2. Anderson APP/TopTorch AP2/TopTorch AP3 Torch-on Underlay
3. Anderson HT 180 Polyester Underlay – Nailed



APP Range Features and Benefits

- High heat resistance.
- Polyester reinforced.
- Superior bond strength with film selvedge.
- Underlay film finished.

APP Capsheet Range

Product Availability		
Product	Roll Width/Length/Weight	Product Code
TopTorch APP Torch-on Capsheet Green Mineral	1m x 8m / 36kg	3101102
TopTorch APP Torch-on Capsheet Brown Mineral	1m x 8m / 36kg	3101104
TopTorch APP Torch-on Capsheet Charcoal Mineral	1m x 8m / 36kg	3101103
TopTorch APP Torch-on Capsheet Plain	1m x 8m / 36kg	3101105
Anderson APP Torch-on Capsheet – Plain	1m x 8m / 32kg	3005495
Anderson APP Torch-on Capsheet – Green Mineral	1m x 8m / 32kg	3005490
Performa APP Torch-on Capsheet Plain	1m x 8m / 36kg	3004977
Performa APP Torch-on Capsheet Green Mineral	1m x 8m / 36kg	3004920

APP Underlay Range

Product Availability		
Product	Roll Width/Length/Weight	Product Code
TopTorch AP2 APP Torch-on Underlay	1m x 16m / 40kg	3101106
TopTorch AP3 APP Torch-on Underlay	1m x 16m /	3101109
Anderson APP Torch-on Underlay	1m x 16m / 40kg	3004913

SBS Modified Bitumen Range

SBS bitumen is modified with Styrene Butadiene Styrene characterised by a softer more elastic feel

Application

- Torch-on

Typical Uses

- Garages
- Extensions
- General roofing

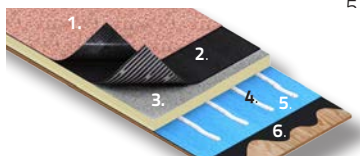
Product Guarantee

- 10 years (life expectancy 15 years).

Typical Build-ups

Warm Roof, Plywood / OSB 3 Deck

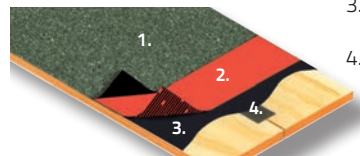
1. See Capsheet choice on page 27
2. Total Torch Vapour Dispersion Layer
3. Thermazone Torch-on Insulation
4. Icopal Terokal TK 395 insulation adhesive*
5. Micoral SK Heat Activated Self Adhesive Vapour Control Layer
6. Icopal SA Primer



* Minimum 3 stripes, 30mm wide at 300mm centres. see page 40 for details.

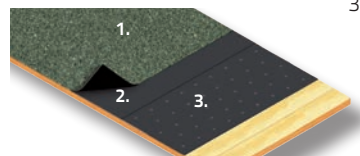
Cold Roof, Plywood / OSB 3 Deck

1. See Capsheet choice on page 27
2. Pyrobar Heat Activated Self Adhesive Underlay
3. Icopal SA Bitumen primer
4. HT 125 Taping Strip to board joints



Cold Roof, Timber Boarded Deck

1. See Capsheet choice on page 27
2. See choice of underlays on page 27
3. Anderson HT 180 Polyester Underlay - nailed



SBS Range Features and Benefits

- Requires less heat to apply.
- Polyester reinforced.
- Superior bond strength with film selvedge.
- Underlays and capsheets available.

SBS Capsheet Range

Product Availability		
Product	Roll Width / Length / Weight	Product Code
Anderson SBS Torch-on Capsheet – Sand	1m x 8m / 30kg	2000312
Anderson SBS Torch-on Capsheet – Green Mineral	1m x 8m / 36kg	2000225
Anderson SBS Torch-on Capsheet – Blue/Grey Mineral	1m x 8m / 36kg	2003688
Anderson SBS Torch-on Capsheet – Brown Mineral	1m x 8m / 36kg	2003689
Anderson SBS Torch-on Mineral Capsheet - Charcoal	1m x 8m / 36kg	2003690
TopTorch SBS Torch-on Mineral Capsheet - Green Mineral	1m x 8m / 36kg	2004180
TopTorch SBS Torch-on Mineral Capsheet - Charcoal Mineral	1m x 8m / 36kg	2004181
TopTorch SBS Torch-on Mineral Capsheet - Brown Mineral	1m x 8m / 36kg	2004182

SBS Underlay Range

Product Availability		
Product	Roll Width / Length / Weight	Product Code
TopTorch SB2 Torch-on Underlay	1m x 16m / 45kg	2004336
TopTorch SB3 Torch-on Underlay	1m x 10m / 40kg	2004337
Anderson SBS Sand Torch-on Underlay	1m x 16m / 45kg	2004294
Anderson SBS Film Torch-on Underlay	1m x 16m / 38kg	2002718
Premium SBS Torch-on Underlay	1m x 10m / 38kg	2004345

SBS Advanced Bitumen

Advanced high performance SBS capsheets with mini groove technology

Application

- Torch-on

Typical Uses

- Suitable for use in all built-up roofing applications
- FireSmart® range available

Product Guarantee

- 15 years (life expectancy 20 years)

Icopal mini groove technology provides maximum adhesion with minimum energy use and is up to 30% faster to apply than traditional torch applied membranes.

Mini Grooves Technology

Only a minimal heat application is required to activate the unique adhesive properties of the special mini grooved bitumen blend. The heat is channelled along the grooves and rapidly disperses the thermofusible backing film. This form of application ensures maximum adhesion with the minimum use of energy to provide a 100% secure bond immediately following application.

Range Features & Benefits

- Unique mini groove technology allows fast application and gives a quick, secure bond
- Polyester reinforcement
- Good lap security gives maximum resistance to wind uplift
- Superior bond strength with film selvedge
- Easy to cut with a sharp knife
- Range of colours available
- Ideal capsheet for use with Total Torch Membranes

Tecnatorch SBS Capsheet Range

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Tecnatorch Capsheet – Sand	1m x 7.5m / 35kg	2002703
Tecnatorch Capsheet – Green Mineral	1m x 7.5m / 37kg	2002705
Tecnatorch Capsheet – Blue/Grey Mineral	1m x 7.5m / 37kg	2002704
Tecnatorch Capsheet – Brown Mineral	1m x 7.5m / 37kg	2002707
Tecnatorch Capsheet – Charcoal Mineral	1m x 7.5m / 37kg	2003538
Tecnatorch Capsheet – White Mineral*	1m x 7.5m / 37kg	2002706

* Made to order. Minimum order quantity applies.

Thermaweld Capsheet Range

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Thermaweld* Capsheet – Blue/Grey Mineral	1m x 8m / 42kg	2000344
Thermaweld* Capsheet – Green Mineral	1m x 8m / 42kg	2000347
Thermaweld* Capsheet – Brown Mineral	1m x 8m / 42kg	2000354
Thermaweld Capsheet – Charcoal Mineral	1m x 8m / 42kg	2003988

* Also available with Copper or Aluminium foil upper surface made to order - minimum quantity applies.



07/4409

SBS Advanced Bitumen

Advanced high performance SBS membranes with FireSmart® and mini groove technology

FireSmart® Capsheets

All the benefits of standard capsheets but incorporating Icopal's unique FireSmart® technology, producing capsheets that provide a fire protection layer, shielding the roof from both spread of flame and fire penetration. For more details contact Icopal Technical Services Department.

FireSmart® Torch-on

- Polyester reinforced
- SBS modified bitumen
- LPCB Approved
- BBA Approved

FireSmart Tecnatorch Range

Product Availability		
Product	Roll Width/Length/Weight	Product Code
FireSmart® Tecnatorch Capsheet – Green Mineral*	1m x 7.5m x 37kg	2003031
FireSmart® Tecnatorch Capsheet – Blue/Grey Mineral*	1m x 7.5m x 37kg	2003030
FireSmart® Tecnatorch Capsheet – Brown Mineral*	1m x 7.5m x 37kg	2003035
FireSmart® Tecnatorch Capsheet – Charcoal Mineral*	1m x 7.5m x 37kg	2004344

* Made to order.

FireSmart Thermaweld Range

Product Availability		
Product	Roll Width/Length/Weight	Product Code
FireSmart® Thermaweld Capsheet – Green Mineral*	1m x 8m x 42kg	2004331
FireSmart® Thermaweld Capsheet – Blue/Grey Mineral*	1m x 8m x 42kg	2004332
FireSmart® Thermaweld Capsheet – Brown Mineral*	1m x 8m x 42kg	2004333
FireSmart® Thermaweld Capsheet – Charcoal Mineral*	1m x 8m x 42kg	2004334
FireSmart® Thermaweld Noxite® Torch-on Mineral Capsheet – Dark Grey	1m x 8m / 38kg	2004335

* Made to order.

Noxite®

Range of Membranes

Nitrogen Oxide (NOx) - is an irritant gas which at high concentrations causes inflammation of the airways. NOx is produced from the reaction of nitrogen and oxygen gases in the air during combustion, especially at high temperatures.

Noxite® roofing membranes purify harmful NOx particles from the air by using titanium dioxide coated granules to act as a catalyst in the process of changing the NOx particles into harmless levels of nitrates.

Noxite® roofing membranes are used in the same way as any other standard Icopal Bituminous waterproofing capsheets and the Noxite® effect remains active for the entire lifespan of the roof, providing continual investment for the future.

Icopal's patented groove technology features in the range allowing low flame application saving 25% of gas consumption and a 30% increase in application speed.

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Noxite® Classic - Light Grey	1m x 7.5m / 41kg	3007126
Thermaweld Noxite® Torch-on Mineral Capsheet – Dark Grey	1m x 8m / 38kg	2004291



SBS Advanced

Bitumen

Reinforced glass fibre coated with highly modified bitumen incorporating engineered stripe technology

Underlays

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Total Torch Vapour Dispersion Layer	1m x 8m / 31kg	2002780

Vapour Control Layers

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Total Torch Vapour Control Layer	1m x 8m / 31kg	2002781



Features & Benefits

- No requirement for a venting base layer – Total Torch Vapour Dispersion Layer replaces conventional Torch-on underlays applied directly to the insulation
- Low melt bitumen allows fast application and gives a quick, secure bond
- Reinforced glass fibre
- Two layers in one
- Superior bond strength
- Good lap security
- Excellent flexibility
- Insulation bonds directly to membrane
- PET core gives excellent vapour resistance

Choice of Capsheets

The following SBS capsheets can be used with this system:

- Anderson SBS, Tecnatorch, Thermaweld
- Icopal range of Firesmart Torch-on Mineral Capsheets

Application

- Torch-on

Typical Uses

- Suitable for all built-up roofing applications

Product Guarantee

With the following capsheets:

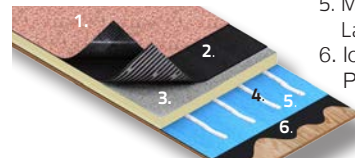
- Tecnatorch – 15 years
- Thermaweld – 20 years
- Icopal FireSmart® Torch-on Mineral Capsheet – 20 years

Total Torch systems feature Glass Fibre reinforced SBS modified membranes and vapour control layers with vapour pressure control.

Typical Build-ups

A. Warm Roof, Plywood / OSB 3 Deck

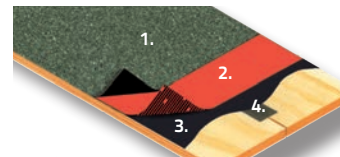
1. Capsheet (see choice).
2. Total Torch Vapour Dispersion Layer
3. Thermazone Torch-on Insulation
4. Icopal TK395 Insulation Adhesive*
5. Micoral SK Vapour Control Layer
6. Icopal SA Bitumen Primer



* Minimum 3 stripes, 30mm wide at 300mm centres. see page 40 for details.

B. Cold Roof, Plywood / OSB 3 Deck

1. Capsheet (see choice)
2. Pyrobar Heat Activated Self Adhesive Underlay
3. Icopal SA Bitumen Primer
4. HT 125 Taping Strip to board joints



Heat Activated Self Adhesive

A range of Vapour Control Layers and Underlays specifically designed for application over flammable substrates

Application

- Heat Activated Self Adhesive

Typical Uses

- Suitable for all built-up roofing applications

Heat Activated Self Adhesive Technology

Membranes in this range use a specially formulated Polymer Modified Self Adhesive Bitumen on the underside of the membrane protected by a pull off release film.

These membranes are required when the application of the first layer of the waterproofing system is to be applied directly to a flammable substrate such as Plywood or OSB 3.

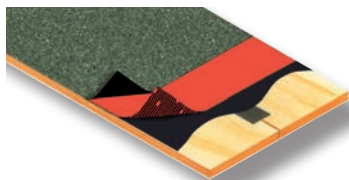
Fixing

Membranes are applied over substrates that have been prepared by priming with Icopal SA Bitumen Primer in accordance with the instructions on the container.

Initial application is by setting the roll and rolling back half way and then carefully cutting the release film and pulling this off whilst rolling the membrane forward applying downward pressure to exclude any air from below the sheet. The use of a rigid tube in the centre of the roll will help this. The operation is repeated for the other half of the roll and subsequent rolls, ensuring all laps are sealed, using hot air equipment and ensuring a continuous bead of bitumen extrudes from overlaps.

During cooler ambient temperatures gentle warming of the underside of the membrane may be required or alternatively, once applied the membrane can be gently over torched to activate the self adhesive underside, this is particularly important if subsequent torch-on layers are not immediately applied.

Regular checks to confirm satisfactory adhesion must be made as work proceeds.



Micoral SK Heat Activated Self Adhesive Vapour Control Layer

Micoral SK heat-activated self-adhesive vapour control layer is a SBS-modified bituminous membrane reinforced with an extra strong glass fibre fleece with a PET aluminium core.

The upper surface is finished with Blue Syntan® and the lower surface is finished with a heat-activated self-adhesive SBS bitumen with a siliconised pull off release film.

Micoaral SK is used as a Vapour Control Layer where insulation is required to be bonded to the VCL using Icopal Terokal 395 Insulation Adhesive.

Pyrobar Underlay

Pyrobar Underlay is a polyester reinforced SBS-modified bituminous membrane. The upper surface is finished with a special Red Syntan® acrylic coating which replaces the traditional sand finish making the product lighter, easier to transport and handle on site. A 75mm safety selvedge with a release sheet is applied along one side of the roll. The lower surface is finished with specially formulated low-melt bitumen resin stripes with Red Syntan® and is protected with a pull-off release sheet.

Pyrobar Detailing Underlay

A self adhesive/heat activated fully bonded detailing underlay featuring the Red Syntan® finish to the upper surface. Enhanced adhesion is achieved as the capsheet is applied.

Product Availability		
Product	Roll Width/Length/Weight	Product Code
Micoral SK Heat Activated Self Adhesive Vapour Control Layer	1m x 15m / 25kg	3006772
Pyrobar Heat Activated Self Adhesive Underlay	1m x 10m / 40kg	3005218
Pyrobar Heat Activated Self Adhesive Detailing Underlay	1m x 10m / 40kg	3005219

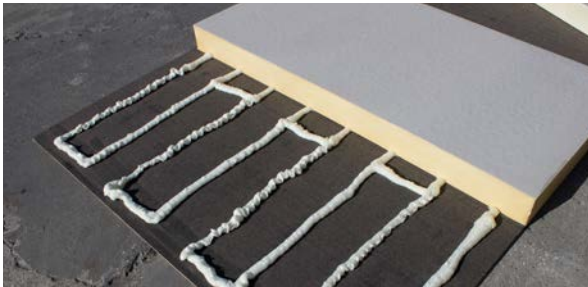
Icopal Terokal TK 395

A single component polyurethane foam adhesive for fast bonding of thermal insulation boards on flat roofs. The handy 750ml canister delivers sufficient adhesive to bond 14sqm of roof area. (See current Icopal application instructions for detailed bonding pattern).

Easy to clean – Simply connect the canister of Terokal Cleaner to the application gun and flush through at the end of use to keep the equipment clean and ready to go on the next job.

- Quick & easy to apply
- Reliable holding power
- Economical and efficient
- Short curing time
- Levels off uneven surfaces
- Bonds all types of insulation
- Works in cold weather

The handy 750ml canister delivers sufficient adhesive to bond up to 14 sqm of roof area. (calculated with 30mm beads at 300mm centres). See current Icopal application instructions for detailed bonding patterns.



Terokal TK 395 is suitable for bonding the following insulation boards on flat roofs:

- Extruded Polystyrene
- Rigid Polystyrene
- Rigid Polyisocyanurate Glass & Bitumen Faced
- Rigid Polyurethane
- Rigid Phenolic
- Mineral Fibre

Easy to Apply

Terokal Application Guns are reusable and can be supplied with a 300mm or 600mm length nozzle, which produce a controlled application of the adhesive onto the substrate.



Terokal TK395 Application

Substrates - Terokal TK 395 is ideal for use on absorbent and non-absorbent surfaces such as:

- Concrete
- Timber – Plywood & OSB
- Brickwork
- Galvanised Metal Decks
- Existing Aged Bitumen Roofs
- Mastic Asphalt (Sand rubbed)
- Mineral surfaced Roofing Felts
- Bitumen Vapour Control Layers

Surface Preparation

- Surfaces must be sound, clean and free from blisters, oil & grease
- Concrete surfaces should be free of latents and sharp projections
- Remove all loose or excess mineral from aged bitumen roofing, prior to application
- Bonding is possible to damp surfaces but avoid over wet or ponding water
- It is recommended to always carry out a trial application to establish bond strength before commencing with the full installation
- For bonding and compatibility to other surfaces consult Icopal Technical Services

User Instructions for TK 395 Application

- Always wear suitable protective eyewear and gloves
- Refer to the Technical Data section for information on application temperatures. Low ambient temperatures can extend the curing process. In high summer temperatures curing time can be accelerated by slightly moistening the surfaces with a fine mist of water (care must be taken to avoid over wetting)
- Vigorously shake the can of Terokal TK 395 prior to screwing on the Terokal Application Gun
- Screw the application gun to the canister
- Gently press the trigger to extrude an even and continuous bead of adhesive 30mm wide (it is recommended to always make a trial application to obtain a 'feel' for the application)
- Adjustment to the foam discharge rate is made on the knob at the back of the application gun
- Apply beads in accordance with the correct spacing as per the application Guidance
- Place the insulation board into the adhesive immediately and press down firmly
- In the unlikely event that the adhesive continues to foam after application it may be necessary to press the boards down again to ensure full contact with the substrate
- Do not allow the adhesive to skin over before applying the insulation board
- Always lay insulation boards with staggered joints
- Replace empty cans immediately with a new tin of Terokal TK 395 Adhesive
- Never forcibly remove the can from the gun
- If the the application gun is not used for an extended period, it must be cleaned thoroughly with Terokal Cleaner
- Fresh adhesive can be cleaned using Terokal Cleaner or when cured by using a scraper

For more detailed application guidance and bonding patterns please refer to the Icopal Terokal 395 Product and Application Guide.

Ancillaries Range

A range of ancillary products specially developed for use with Icopal roofing membranes.

Xtra-Seal SF Bitumen Primer

Solvent free bitumen primer for use with heat activated self-adhesive systems where solvent odours may be an issue. Available in 18 litre tub. (coverage 10- 30m²/LT; 180-540m² per 18Ltr Tub, depending on porosity of substrate).

Use – priming plywood, OSB concrete, cementitious screeds, and masonry. Apply with a brush or roller (use above 5°C). Avoid frost and rain before product is dry.

Product Data	
Colour	Dries to a black finish
Approx Coverage	3-11m ² /Lt (54-198m ² per 18Lt tub, depending on substrate porosity)
Drying Time	2 – 3 hours depending on ambient conditions

Product Availability	
Container Size	Product Code
18 litre plastic tub	3005737

Xtra-Seal QD Bitumen Primer

Quick drying high penetrating bitumen primer.

Use - priming plywood, OSB, concrete, cementitious screeds, metal, masonry and weathered bitumen and mastic asphalt. Apply with a brush or roller.

Product Data	
Colour	Dries to a black finish
Approx. Coverage	3-11m ² /Lt (75-275m ² per 25Lt drum depending on substrate porosity)
Drying Time	Approximately 3-4 hours depending on ambient conditions

Product Availability	
Container Size	Product Code
25 litre screw cap plastic drum	3000862

Icopal SA Bitumen Primer

Icopal SA Bitumen Primer is a low viscosity, black, quick drying bitumen priming solution consisting of high quality bitumen's and hydrocarbon solvents designed to penetrate and seal dusty or porous substrates of masonry, concrete, cementitious screeds or renders, existing bituminous or asphalt waterproofing, structural steelwork and other metals, prior to the application of heat activated self-adhesive bituminous membranes.

Icopal SA Bitumen Primer

Product Data	
Colour	Dries to a Black Finish
Approx. Coverage	4-10m ² /Kg (18-45m ² per 4.5kg tin depending on substrate porosity)
Drying Time	5 – 30minutes depending on ambient conditions

Product Availability	
Container Size	Product Code
4.5kg Tin	3007163

HT Taping Strip

Product Availability		
Product	Roll Width & Length	Product Code
HT 125 Taping Strip	100mm x 16m	2002605

Icopal Bitumen Sealant

Product Availability		
Product	Size & Quantity	Product Code
Icopal Bitumen Sealant	300ml Cartridge 12 per carton	3005190

Icopal Terokal TK 395

A single component polyurethane foam adhesive for fast bonding of thermal insulation boards on flat roofs. The handy 750ml canister delivers sufficient adhesive to bond up to 14 sqm of roof area. (calculated with 30mm beads at 300mm centres).

Easy to Clean - Simply connect the canister of Terokal Cleaner to the application gun and flush through at the end of use to keep the equipment clean and ready to go on the next job.

Icopal Terokal TK395 Insulation Adhesive

Product Availability	
Container Size	Product Code
12 x 750ml canisters per carton	3100699

Icopal Terokal Cleaner

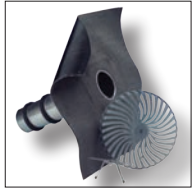
Product Availability	
Container Size	Product Code
12 x 750ml canisters per carton	3100700

Icopal Terokal adhesive gun

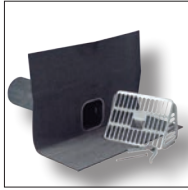
Product Availability	
Container Size	Product Code
600mm	3100701
300mm	3100702

Roofgard Range

Roofing accessories for roof drainage, vents and ducts for pipes and cables, and a range of GRP roof edge trims that provide a neat and pleasing finish to roof edges.



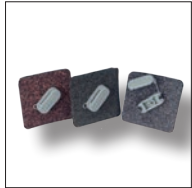
Roof Outlets & Leaf Grates.



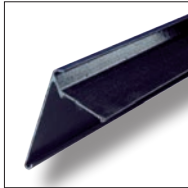
Parapet Outlet.



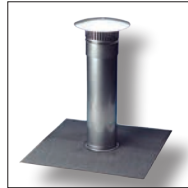
Cable & Pipe Duct.



AnchorFast Lightning Conductor Pads.



GRP Edge Trim.



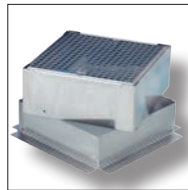
Cowled Telescopic Vent.



Plant & Equipment Support System.



Paving Support System.



Terrace Grates.



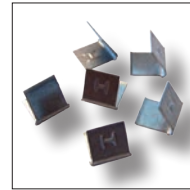
TerraDeck Timber Tile.

FormFlash

Lead free flexible waterproof flashing designed to replace traditional lead flashing.



FormFlash.



FormFlash Fixing Clips – replace traditional lead wedges saving time and money.

Safety Systems



KwikGuard Fall Restraint Systems.



KwikGuard Edge Protection Systems.

Dalite Rooflights

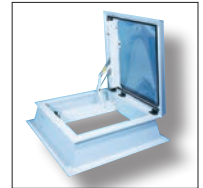
Rooflights and access hatches available in a large range of sizes and styles.



Dalite Vista – Dome.



Dalite Stratus – Pyramid.



Dalite Stratus – Access Hatch.



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